AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) A method of transforming data from a high-dimensional to low-dimensional design space and deriving an optimum value for a predetermined function representative of the transformed data in the low-dimensional design space, which derivation is further effected in the low-dimensional design space in dependence upon an inspection of the transformed data.

2. (original) A method of transforming data from a high-dimensional to low-dimensional design space, and deriving a conditional value for a predetermined function representative of the transformed data in the low-dimensional design space, which derivation is further effected in the low-dimensional design space in dependence upon an inspection of the transformed data.

3. (currently amended) A method as claimed in claim 1 ~~or 2~~ wherein the value is derived by (a) establishing a mathematical combination of a number of independent design variables and dependent design variables relating to the function, and (b) modifying said combination in the low-dimensional design space to derive therefrom the desired value for the function at which various constraints associated with the function are satisfied and at which the function has a

conditional high or low value in relation to other possible values of the function which are determined in accordance with the modification of said combination.

4. (currently amended) A method as claimed in claim 1~~, 2 or claim 3~~ wherein said transformation into the low-dimensional design space is performed by application of a Generative Topographic Map (GTM) technique.

5. (currently amended) A method as claimed in ~~any preceding claim~~ Claim 1, comprising the step of transforming data from a first high-dimensional design space and from a second, different high-dimensional design space into a low-dimensional design space, comparing the different transformed data sets in said low-dimensional design space and identifying therefrom similarities between the different transformed data sets to indicate a correspondence between the first and second high-dimensional design spaces.

6. (original) A method as claimed in claim 5 wherein the first high-dimensional design space is a 5-dimensional design space, the second high-dimensional design space is an 8-dimensional design space, the third is a 14-dimensional design space, and the low-dimensional design space is a two-dimensional design space.

7. (currently amended) A method as claimed in ~~any of claims 3 to 6~~ claim 3 wherein the data transformation into the low-dimensional design space is performed in a

manner which takes account of the effect of each of the design variables relating to the function.

8. (currently amended) A method as claimed in ~~any preceding~~ claim 1 wherein the value derivation is effected by generating an image map representation of the transformed data in the low-dimensional design space, and visually identifying an intersecting region in the image map representation, which intersecting region provides an indication of said value.

9. (currently amended) A method as claimed in ~~any preceding~~ claim 1 for application to an aircraft design or to an aerodynamic surface design.

10. (original) A method substantially as herein described with reference to the accompanying drawings.

11. (currently amended) A program element comprising program code operable to carry out a method as claimed in ~~any preceding~~ claim 1.

12. (original) The program element of claim 11 on a carrier medium.

13. (currently amended) A data processing system for transforming data from a high-dimensional to low-dimensional design space adapted and arranged to carry out a method as claimed in ~~any preceding~~ claim 1.

14. (original) A data processing system substantially as herein described with reference to the accompanying drawings.